

**REMARKS**

These amendments and remarks are in response to the Final Office Action dated November 18, 2009. This amendment is accompanied by a Request for Continued Examination. Applicants request a three-month extension of time and authorization is given to charge all appropriate fee to Deposit Account No. 50-0951.

In the Office Action, claims 1-6 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting. Claims 1-4 and 7 were rejected under 35 U.S.C. §102(b). Claims 5 and 6 were rejected under 35 U.S.C. §103(a). The rejections are discussed in more detail below.

**I. Double-Patenting Rejection**

Claims 1-4 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting (ODP) as being unpatentable over claim 1 of copending Application No. 11/572,403. Claims 5 and 6 are provisionally rejected in the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of copending Application No. 11/572,403. Applicants again traverse this rejection.

First, Applicants note that copending Application No. 11/572,403 (US 2008/0008633) has a PCT filing date of July 22, 2005, and a foreign priority date of July 29, 2004. The present application has a PCT filing date of January 15, 2004, and a foreign priority date of January 29, 2003. Thus, the present application is the earlier application, having both an earlier effective U.S. filing date and an earlier priority date than either the effective U.S. filing date or the foreign priority date of 11/572,403. Additionally, 11/572,403 has claims which are narrower than the present claims because they recite features related to the structure of the catalytic beds, as well as the distributing and connecting means that are not in the present claims. Thus, 11/572,403 has patentably distinct claims from the present application because of the additional features recited, and would not be an appropriate target for an ODP rejection on this basis. MPEP §804 I.B.1. states:

If "provisional" ODP rejections in two applications are the only rejections remaining in those applications, the examiner should withdraw the ODP rejection in the earlier filed application thereby permitting that application to issue without

need of a terminal disclaimer. A terminal disclaimer must be required in the later-filed application before the ODP rejection can be withdrawn and the application permitted to issue. If both applications are filed on the same day, the examiner should determine which application claims the base invention and which application claims the improvement (added limitations). The ODP rejection in the base application can be withdrawn without a terminal disclaimer, while the ODP rejection in the improvement application cannot be withdrawn without a terminal disclaimer.

Thus, in the present application, being the earlier application, and also the "base" application, it is not appropriate to require a terminal disclaimer over the later application. Additionally, given that Application No. 11/572,403 was not subject to an ODP rejection because of its patentably distinct claims, and has been allowed, there is no rejection outstanding on the later application. Thus, the ODP rejection should be withdrawn.

## **II. Rejections to the claims based upon Art**

Claims 1-4 and 7 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,976,928 to Foster et al. ("*Foster*"). Claims 5 and 6 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Foster* in view of U.S. Patent Publication No. 2002/0018740 to Filippi et al. ("*Filippi*"). Applicants submit that the claims are patentable over these references.

*Foster*, which is newly cited, discloses and teaches a reactor which is exactly of the same type as the reactor disclosed and taught in the previously cited document Zardi (U.S. Patent No. 4,769,220). Therefore Applicants' arguments set forth in the response of November 5, 2008 in relation to *Zardi* also apply to *Foster*. Please note that these arguments were considered persuasive by the Examiner as stated at point 1 of the Office Action dated January 13, 2009.

In particular, it should be noted that *Foster* is concerned with a chemical reactor of the so-called adiabatic type, wherein no heat is taken away from or supplied to the respective catalytic bed when the chemical reaction takes place. Heat exchange between the reaction mixture and a heating or cooling fluid only occurs outside the catalytic beds, in particular before or after them. That is after the chemical reaction in the respective catalytic bed has taken place. This is for instance clearly shown in figure 1 of *Foster*, wherein the tube bundle heat exchangers 5, 5' are placed outside the catalyst beds 4, 4'. According to the disclosure and teaching of *Foster*, no heat is removed during the radial flow of the gas through the catalytic beds, i.e. during the passage of the

Response to Final Office Action dated November 18, 2009

gas from the inlet to the outlet perforated walls defining the catalytic beds, where the gas is changed into reaction gas and thus heated due to the exothermic reaction.

The reactor of *Foster* is adiabatic and thus cannot operate in pseudo-isothermal conditions. Contrary to the adiabatic reactor of *Foster*, in a pseudo-isothermal reactor, the cooling/heating fluid exchanges heat with the reaction mixture at the same time as the reactants of the reaction mixture react, i.e. during the chemical reaction itself. To this aim, the heat exchangers are placed within the catalytic bed (i.e. reaction zone) as clearly indicated in present claim 1.

It follows that *Foster* does not disclose all the features of present claim 1, which is thus novel over *Foster*, and is concerned with a reactor of totally different conception, both from the structural and functional point of view, if compared to the chemical reactor of the present claims.


Thus, the subject matter of independent claims 1 and 7 are patentable over the cited art. Similar arguments apply to dependent claims 2-6, which are believed allowable because of their dependence upon allowable base claims, and because of the further features recited. All claims are thus believed to relate to patentable subject matter, and to be in condition for allowance.

### **III. Conclusion**

Applicants have made every effort to present claims which distinguish over the prior art, and it is thus believed that all claims are in condition for allowance. Nevertheless, Applicants invite the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. In view of the foregoing remarks, Applicants respectfully request reconsideration and prompt allowance of the pending claims.

Respectfully submitted,

Date: 5-18-10

  
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